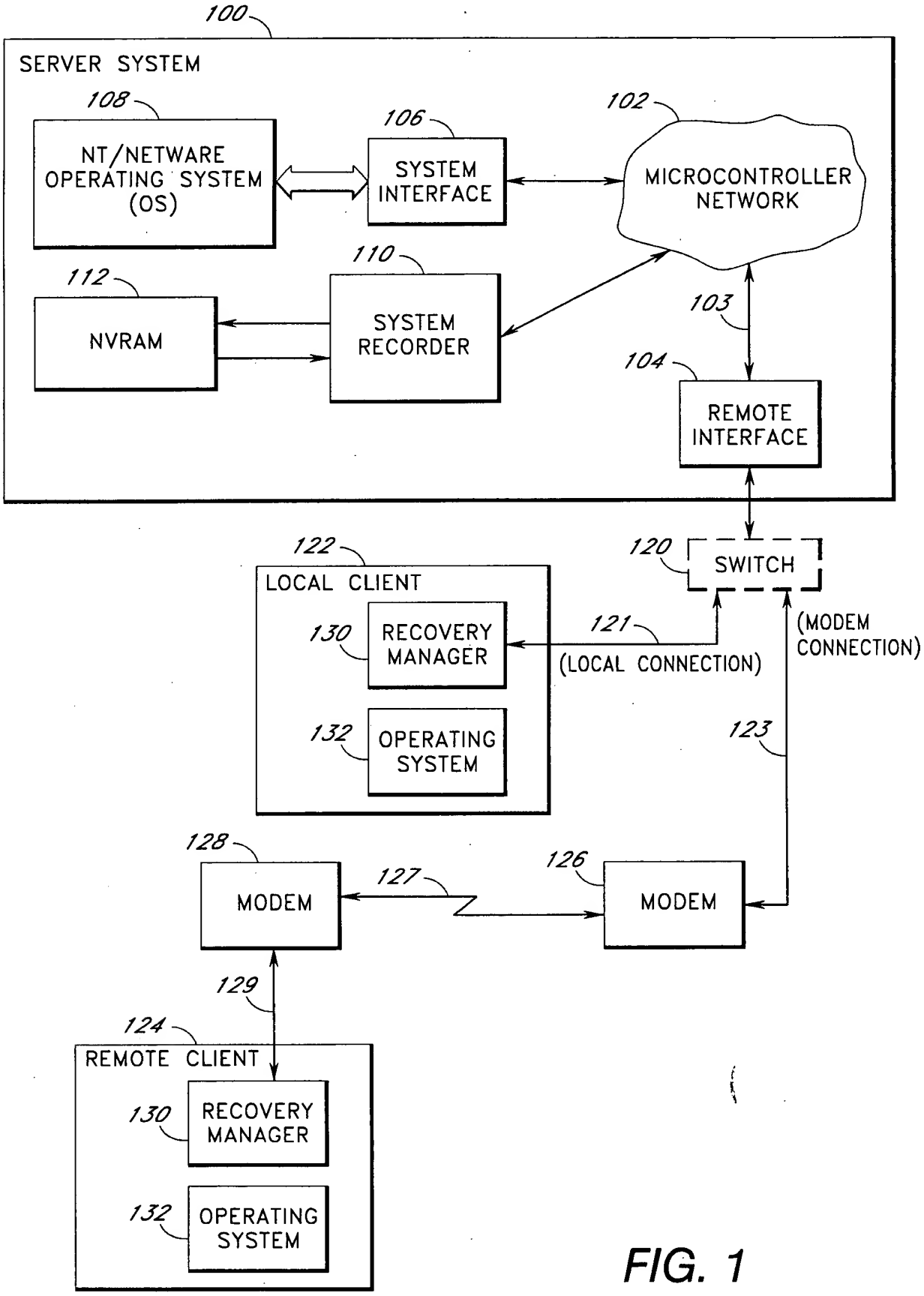

100
SERVER SYSTEM
108
NT/NETWARE OPERATING SYSTEM (OS)
106
SYSTEM INTERFACE
102
MICROCONTROLLER NETWORK
110
112
NVRAM
SYSTEM RECORDER
103
104
REMOTE INTERFACE
120
SWITCH
122
LOCAL CLIENT
130
RECOVERY MANAGER
121
(LOCAL CONNECTION)
(MODEM CONNECTION)
132
OPERATING SYSTEM
123
128
MODEM
127
126
MODEM
129
124
REMOTE CLIENT
130
RECOVERY MANAGER
132
OPERATING SYSTEM

FIG. 1

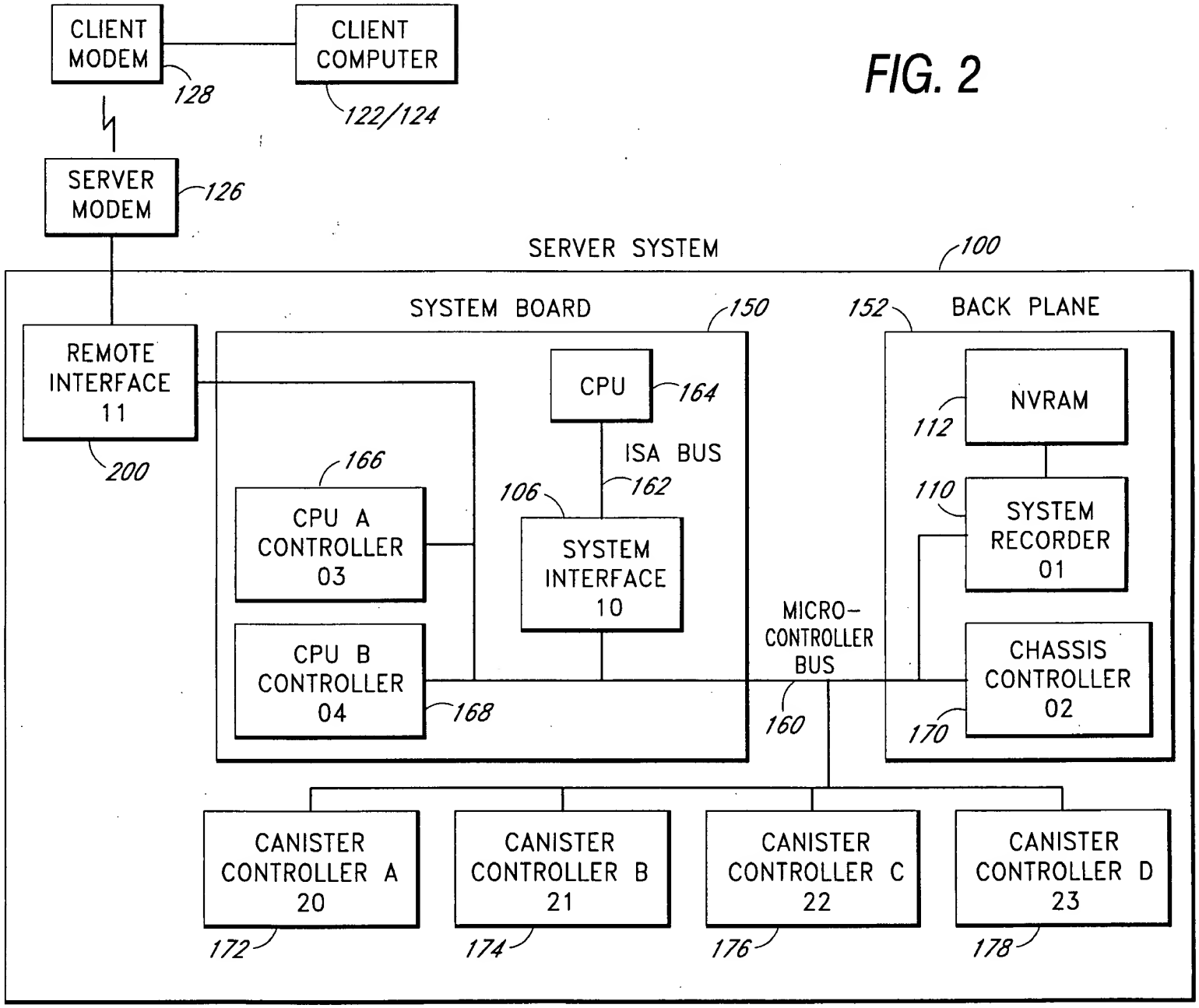

CLIENT MODEM
128
CLIENT COMPUTER
122/124
SERVER MODEM
126
SERVER SYSTEM
100
SYSTEM BOARD
150
152
BACK PLANE
REMOTE INTERFACE 11
200
CPU
164
ISA BUS
162
106
166
CPU A CONTROLLER 03
SYSTEM INTERFACE 10
CPU B CONTROLLER 04
168
MICRO-CONTROLLER BUS
160
NVRAM
112
110
SYSTEM RECORDER 01
CHASSIS CONTROLLER 02
170
CANISTER CONTROLLER A 20
CANISTER CONTROLLER B 21
CANISTER CONTROLLER C 22
CANISTER CONTROLLER D 23
172
174
176
178

FIG. 2

REMOTE INTERFACE BOARD AND CONNECTIONS

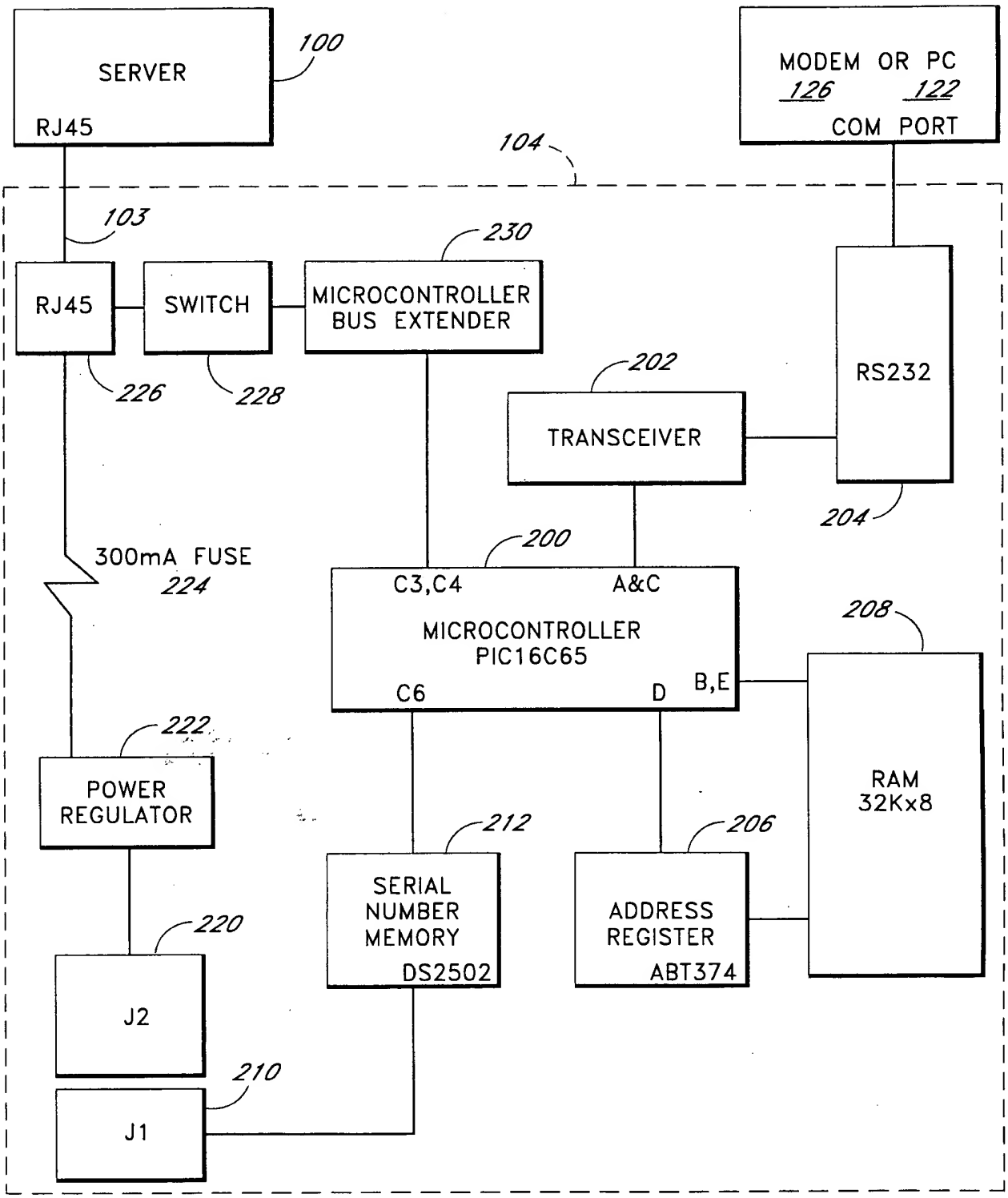


FIG. 3

Remote Interface Serial Protocol Message Formats

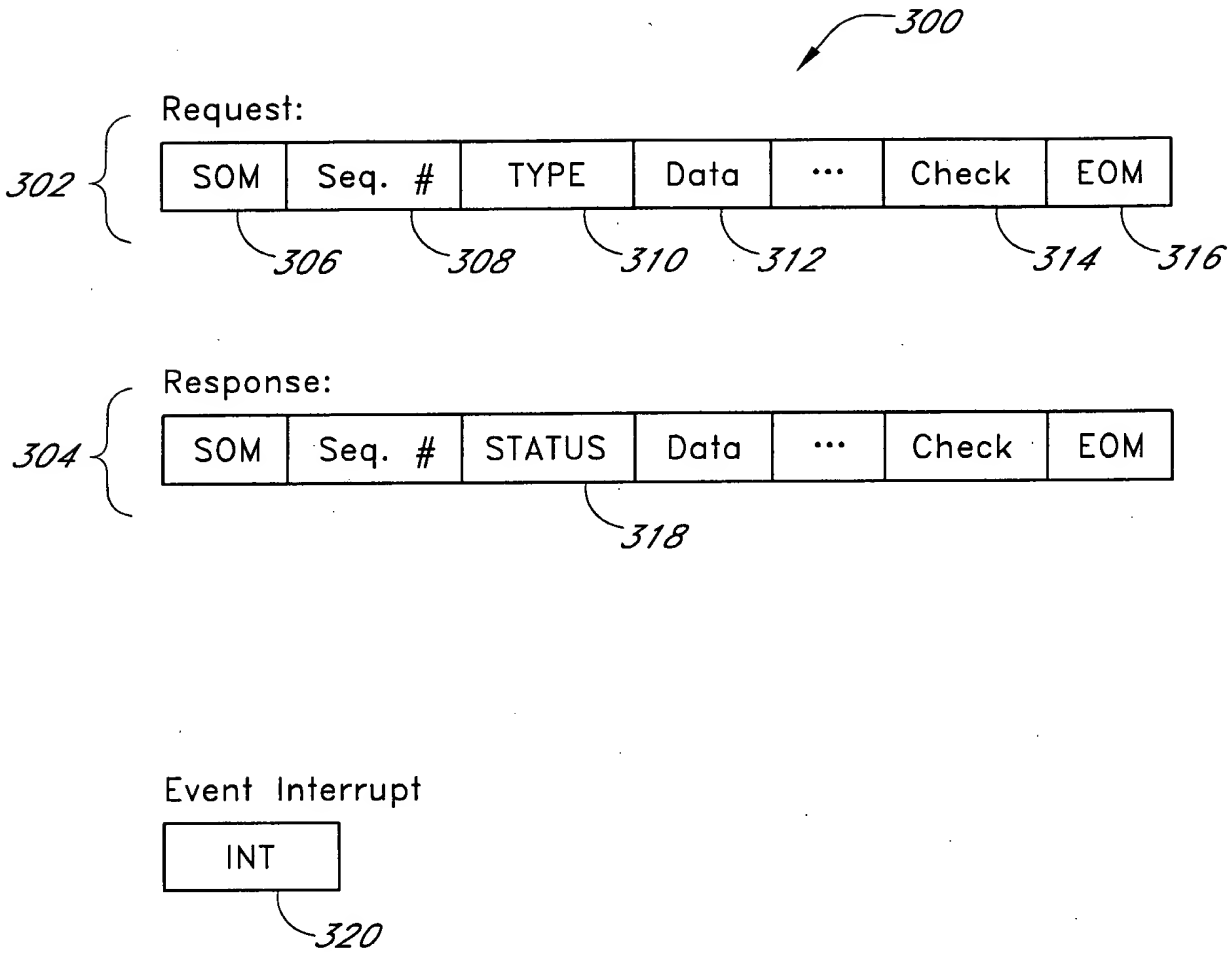


FIG. 4

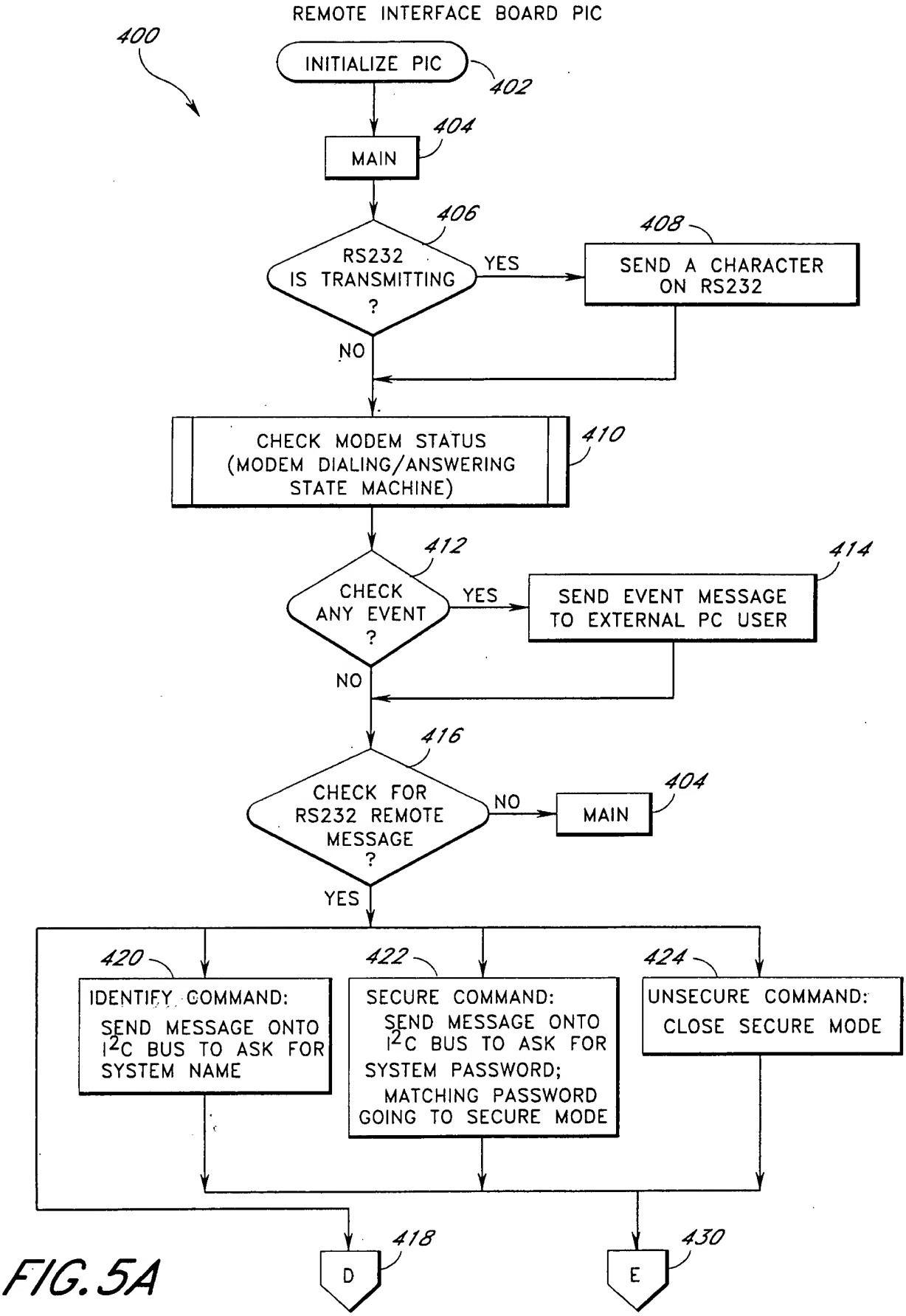

REMOTE INTERFACE BOARD PIC
400
INITIALIZE PIC
402
MAIN
404
RS232 IS TRANSMITTING ?
406
YES
SEND A CHARACTER ON RS232
408
NO
CHECK MODEM STATUS (MODEM DIALING/ANSWERING STATE MACHINE)
410
CHECK ANY EVENT ?
412
YES
SEND EVENT MESSAGE TO EXTERNAL PC USER
414
NO
CHECK FOR RS232 REMOTE MESSAGE ?
416
NO
MAIN
404
YES
IDENTIFY COMMAND: SEND MESSAGE ONTO I2C BUS TO ASK FOR SYSTEM NAME
420
SECURE COMMAND: SEND MESSAGE ONTO I2C BUS TO ASK FOR SYSTEM PASSWORD; MATCHING PASSWORD GOING TO SECURE MODE
422
UNSECURE COMMAND: CLOSE SECURE MODE
424
D
418
E
430

FIG. 5A

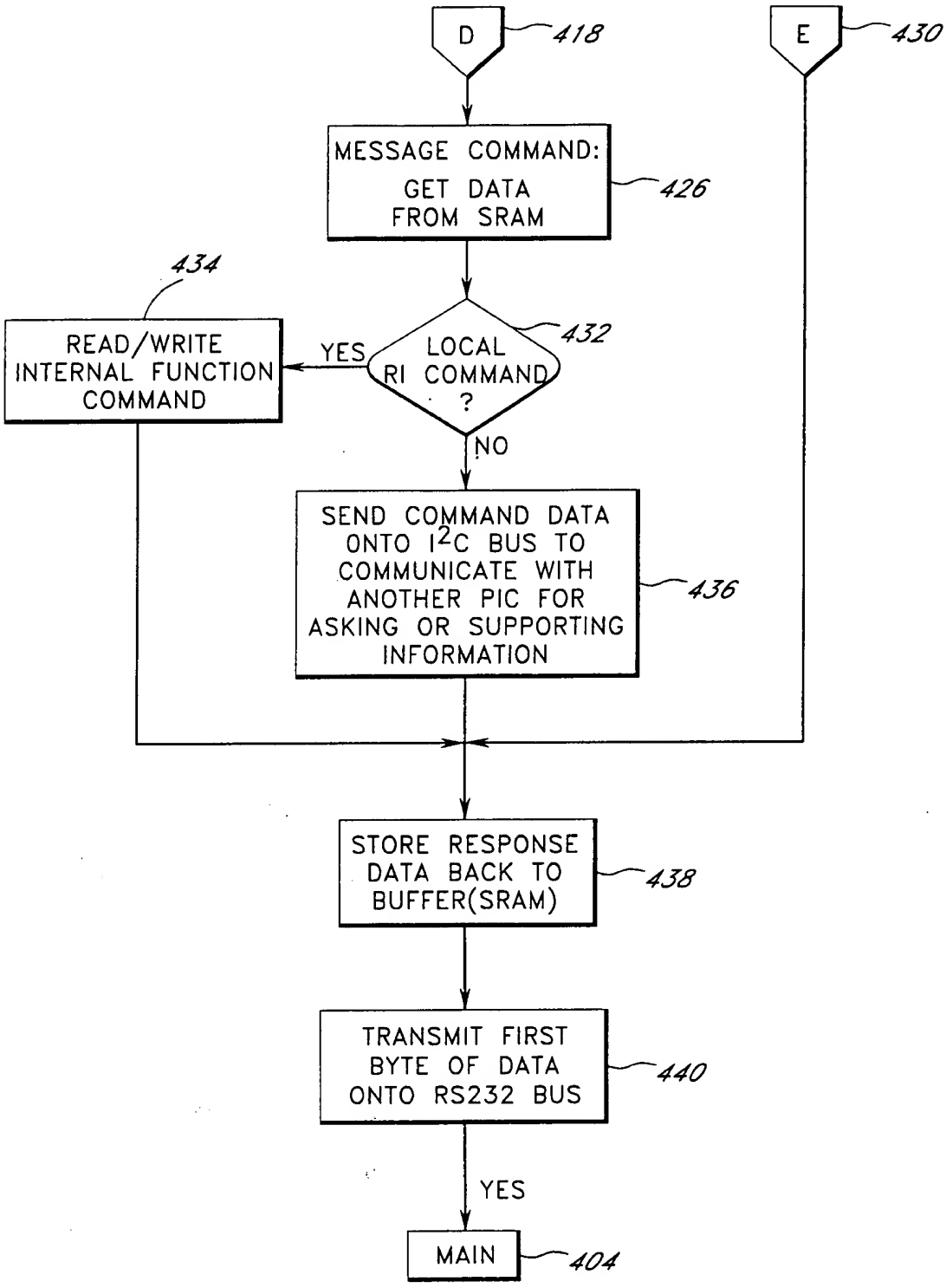
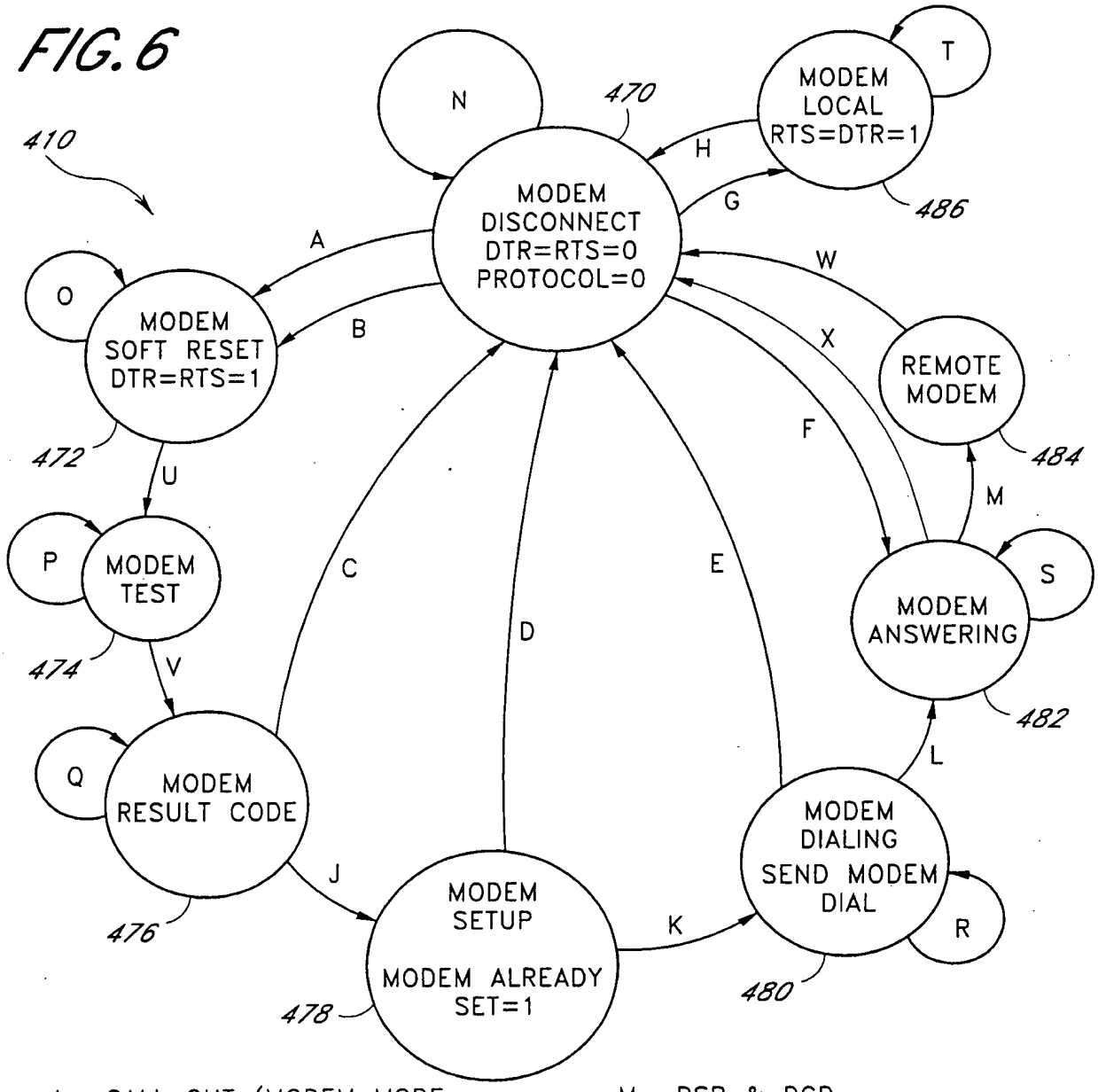

D
418
E
430
MESSAGE COMMAND:
GET DATA
FROM SRAM
426
434
READ/WRITE
INTERNAL FUNCTION
COMMAND
YES
LOCAL
RI COMMAND
?
432
NO
SEND COMMAND DATA
ONTO I2C BUS TO
COMMUNICATE WITH
ANOTHER PIC FOR
ASKING OR SUPPORTING
INFORMATION
436
STORE RESPONSE
DATA BACK TO
BUFFER(SRAM)
438
TRANSMIT FIRST
BYTE OF DATA
ONTO RS232 BUS
440
YES
MAIN
404

FIG. 5B

MODEM DIALING AND ANSWERING STATE MACHINE

FIG. 6



A- CALL OUT (MODEM MODE & MODEM ALREADY SET & CTS & nDIAL RETRIES)
B- SETUP (MODEM MODE & !MODEM ALREADY SET & CTS)
C- !RESULT STATUS OK
D- !nDIAL RETRIES
E- !DIAL OK
F- RINGING (MODEM MODE & MODEM ALREADY SET & CTS & RING)
G- DSR
H- (LOCAL & MODEM MODE) V !DSR
J- RESULT STATUS OK
K- nDIAL RETRIES
L- DIAL OK
M- DSR & DCD
N- !CTS V !nDIAL RETRIES V !RING V !DSR
O- !SEND STRING DONE
P- !SEND STRING DONE
Q- !MODEM RESULT STATUS DONE
R- !PREV EOS & !2 SECONDS
S- !DSR V !DCD
T- DSR
U- SEND STRING DONE
V- SEND STRING DONE
W- !DCD
X- !DCD & TIMEOUT